

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
9 June 2005 (09.06.2005)

PCT

(10) International Publication Number  
**WO 2005/052567 A1**

(51) International Patent Classification<sup>7</sup>: **G01N 27/447**,  
33/68

(US). DINGLEY, Amy [US/US]; 131 Brown Avenue,  
Roslindale, MA 02131 (US).

(21) International Application Number:  
PCT/US2004/041346

(74) Agents: DINI, Peter, W. et al.; Lahive & Cockfield, LLP,  
28 State Street, Boston, MA 02109 (US).

(22) International Filing Date:  
23 November 2004 (23.11.2004)

(81) Designated States (*unless otherwise indicated, for every  
kind of national protection available*): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/525,108 24 November 2003 (24.11.2003) US

(71) Applicant (*for all designated States except US*): BIOGEN  
IDEC MA INC. [US/US]; 14 Cambridge Center, Cam-  
bridge, MA 02142 (US).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): VASILYEVA, Elena  
[RU/US]; 122 Babcock Street, Apartment 3, Brookline,  
MA 02446 (US). BROWN, Francine [US/US]; 2 Dodge  
Road, Westford, MA 01886 (US). KRETSCHMER,  
Matthias [US/US]; 12 Viles Street, Weston, MA 02493  
(US). BOVE, Peter [US/US]; 4 East Terrace, Burlington,  
VT 05405 (US). FAJARDO, Hans [US/US]; 67 Hinckley  
Street, Somerville, MA 02145 (US). TAYLOR, Freder-  
ick, R. [US/US]; 98 Gulliver Street, Milton, MA 02186  
(US). MHATRE, Rohin [US/US]; 27 Charles Street,  
Lexington, MA 02421 (US). KOBAYASHI, Kazumi  
[JP/US]; 24 Twin Circle Drive, Arlington, MA 02474

(84) Designated States (*unless otherwise indicated, for every  
kind of regional protection available*): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE,  
SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,  
GW, ML, MR, NE, SN, TD, TG).

**Published:**

- with international search report
- before the expiration of the time limit for amending the  
claims and to be republished in the event of receipt of  
amendments

*For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.*

(54) Title: METHODS FOR DETECTING HALF-ANTIBODIES USING CHIP-BASED GEL ELECTROPHORESIS

(57) Abstract: The invention provides a method of using chip-based gel electrophoresis to determine the presence of polypeptides with selected disulfide linkage patterns, for example, completely formed tetrameric antibodies as compared to incompletely formed heterodimeric half-antibodies. The invention further features a kit, comprising a chip, and instructions for conducting the foregoing method. The methods and kits of the invention are amendable to high throughput applications for the monitoring of production and quality control of recombinant therapeutic antibodies.

WO 2005/052567 A1